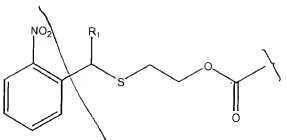

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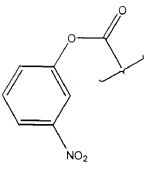

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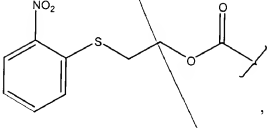

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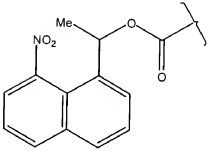

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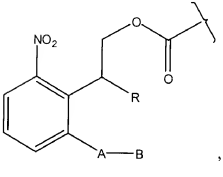

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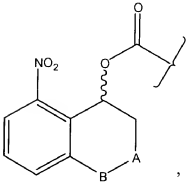

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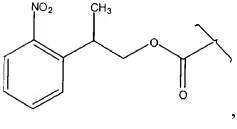

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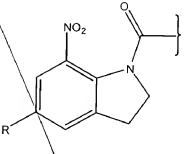


wherein:

the aromatic ring is optionally substituted with an alkoxy group or a methylenedioxy group;

A is O, S, N-alkyl, N-aryl, or $(CH_2)_n$;

n is 0 to about 3;

B is an aprotic, weakly basic group;

R and R_1 are each, independently, -H, an optionally substituted alkyl group, an optionally substituted alkenyl group, an optionally substituted alknyl group, an optionally substituted aryl group, or an optionally substituted heteroaromatic group.

2. (Amended) The compound of Claim 1, wherein M is selected from the group consisting of an amino acid, a peptide, nucleoside, nucleotide, polynucleotide or analogs thereof, a monosaccharide and a protein.

3. (Amended) The compound of Claim 2, wherein M is a base-protected deoxynucleoside, wherein the deoxynucleoside is a deoxyadenosine, a deoxycytidine, a thymidine or a deoxyguanosine.

4. (Amended) The compound of Claim 3, wherein M is selected from the group consisting of base protected deoxynucleoside H-phosphonates and base protected deoxynucleoside phosphoramidites.

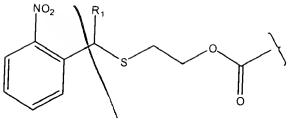
5. (Amended) A method of attaching a molecule with a reactive site to a support comprising the steps of:

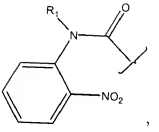
(a) providing a support with a reactive site;

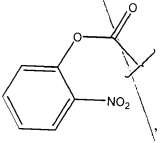
(b) binding a first molecule represented by the formula M_1-Y_1 to the reactive site, wherein:

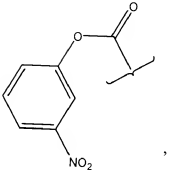
M_1 is a monomeric building block having a reactive site that is masked by Y_1; and

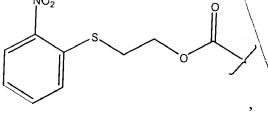
Y_1 is a photolabile protecting group selected from the group consisting of:

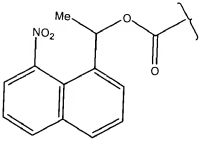


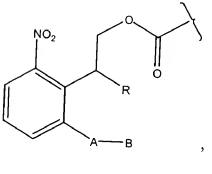


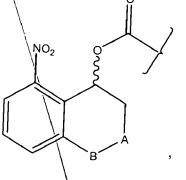


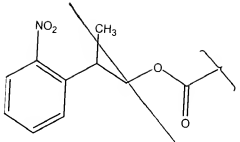












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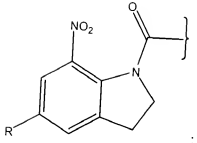


; and

wherein:

the aromatic ring is optionally substituted with an alkoxy group or a methylenedioxy group;

A is O, S, N-alkyl, N-aryl, or $(CH_2)_n$;

n is 0 to about 3;

B is an aprotic, weakly basic group;

R and R_1 are each, independently, -H, an optionally substituted alkyl group, an optionally substituted alkenyl group, an optionally substituted alknyl group, an optionally substituted aryl group, or an optionally substituted heteroaromatic group; and

(c) removing Y_1 to provide a derivatized support comprising M_1 with an unmasked reactive site immobilized thereon.

7. (Amended) The method of Claim 5, further comprising:

(a) coupling a second molecule represented by the formula M_1-Y_1 to the unmasked reactive site, wherein Y_1 and M_1 of the second molecule are selected independent of the first molecule, to produce a derivatized support having immobilized thereon a chain of the first and the second molecules; and

(b) removing Y_1 from the second molecule to provide a derivatized support with a chain of the first and the second molecules with a second unmasked reactive site immobilized thereon.

8. (Amended) The method of Claim 7, further comprising repeating steps (a) and (b) of Claim 7 with a succession of molecules represented by the formula M_1-Y_1, wherein Y_1 and M_1 for each occurrence are selected independently, to provide a chain of molecules immobilized on the support.

9. (Amended) The method of Claim 8, wherein M_1 for each occurrence is a deoxynucleoside.

11. (Amended) The method of Claim 9, wherein Y_1 of each deoxynucleoside masks a 5'-OH.

12. (Amended) The method of Claim 7, wherein Y_1 from said first and said second molecules is removed by irradiation at a wavelength of greater than 350 nm.

14. (Amended) A method of forming, from component molecules represented by the formula M_1-Y_1, a plurality of compounds bound to a support, each compound occupying a separate predefined region of the support, said method comprising the steps of:

(a) activating a first region of the support;

(b) binding a molecule represented by the formula M_1-Y_1 to the first region;

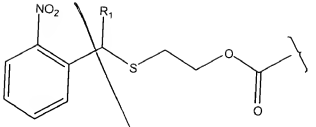
(c) repeating steps (a) and (b) on other regions of the support whereby each of said other regions has bound thereto another molecule represented by the formula M_1-Y_1;

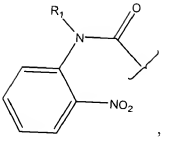
(d) removing Y_1 from the M_1 that is bound to one or more regions of the support to provide one or more regions having an unmasked reactive site;

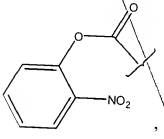
(e) binding an additional molecule represented by the formula M_1-Y_1 to the said one or more unmasked reactive sites, wherein:

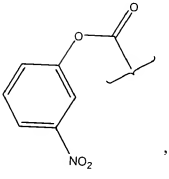
M_1 for each occurrence is an independently selected monomeric building block having a reactive site that is masked by Y_1; and

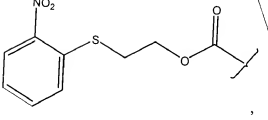
Y_1 for each occurrence is a photolabile protecting group that is independently selected from the group consisting of:

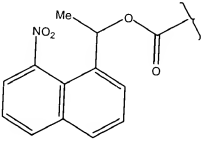

NO2
R1
S
O
O

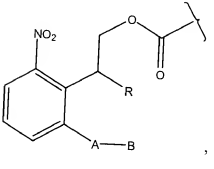

R1
N
O
NO2

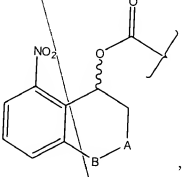

O
O
NO2

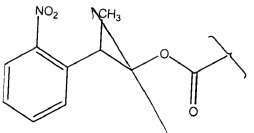

O
O
NO2


NO2
S
O
O


Me
O
NO2
O


NO2
O
O
R
A
B


O
NO2
O
B
A



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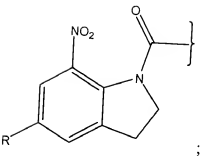


;

wherein:

the aromatic ring is optionally substituted with an alkoxy group or a methylenedioxy group;

A is O, S, N-alkyl, N-aryl, or $(CH_2)_n$;

n is 0 to about 3;

B is an aprotic, weakly basic group;

R and R_1 are each, independently, -H, an optionally substituted alkyl group, an optionally substituted alkenyl group, an optionally substituted alknyl group, an optionally substituted aryl group, or an optionally substituted heteroaromatic group; and

(f) repeating steps (d) and (e) on regions of the support until a desired plurality of compounds is formed from the component molecules represented by formula M_1-Y_1, each compound occupying separate predefined regions of the support.

16. (Amended) The method of Claim 14, wherein M_1 for each occurrence is a deoxynucleoside.

18. (Amended) The method of Claim 16, wherein Y_1 of each deoxynucleoside masks a 5'-OH or a 3'-OH.

19. (Amended) The method of Claim 14, wherein Y_1 is removed by irradiation at a wavelength of greater than 350 nm.

21. (Amended) The method of Claim 14, wherein the plurality of different compounds bound to the support comprises at least 10^6 different compounds.

23. (Amended) The method of Claim 14, further comprising:

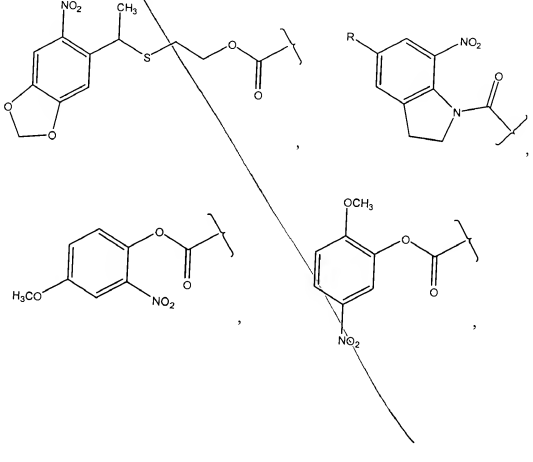
(a) covalently binding a molecule comprising a masked reactive site linked to a chemically labile protecting group to a reactive site, wherein the reactive site is either on an activated region of the support as formed in step (a) of Claim 14 or is an unmasked reactive site on a molecule bound to the support as formed in step (d) of Claim 14;

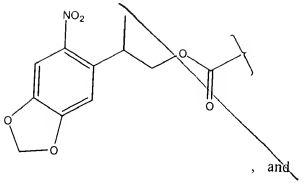
(b) replacing the chemically labile protecting group with a photolabile protecting group to provide a region of the support having a molecule with the photolabile protecting group; and

(c) optionally repeating steps (d)-(f) of Claim 14.

Please add new Claims 30-35.

30. (New) A compound represented by the formula $M\text{-}Y_1$, wherein Y_1 is selected form the group consisting of:





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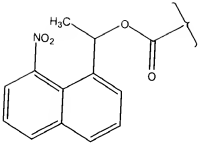

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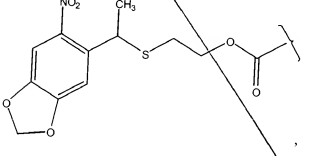
31. (New) The compound of Claim 30, wherein M is a nucleoside β-cyanoethyl phosphoramidite.

32. (New) The method of Claim 8, wherein Y_1 for each occurrence is, independently, selected from the group consisting of:



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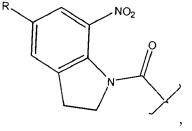

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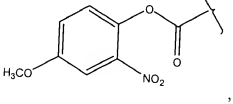

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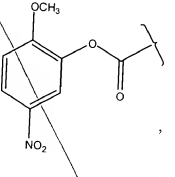

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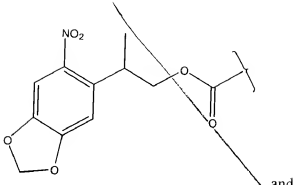

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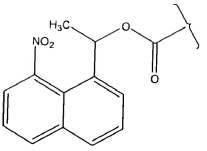
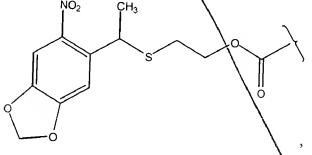


33. (New) The method of Claim 32, wherein M_1 for each occurrence is a nucleoside β-cyanoethyl phosphoramidite.

34. (New) The method of Claim 14, wherein Y_1 for each occurrence is, independently, selected from the group consisting of:



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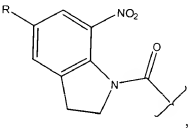

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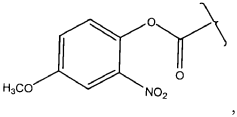

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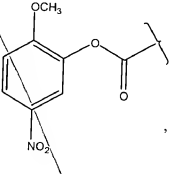

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